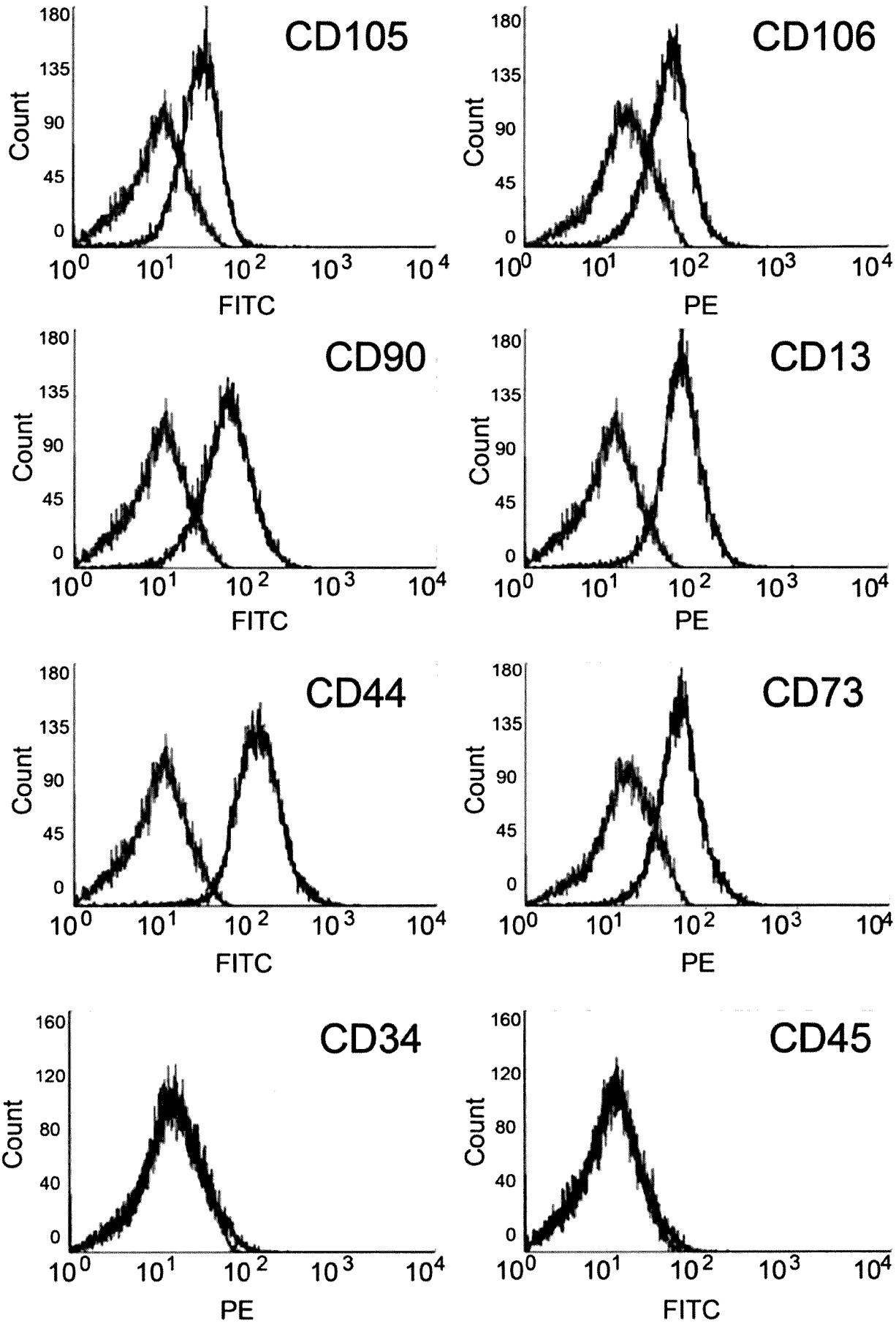


Fig. 1A

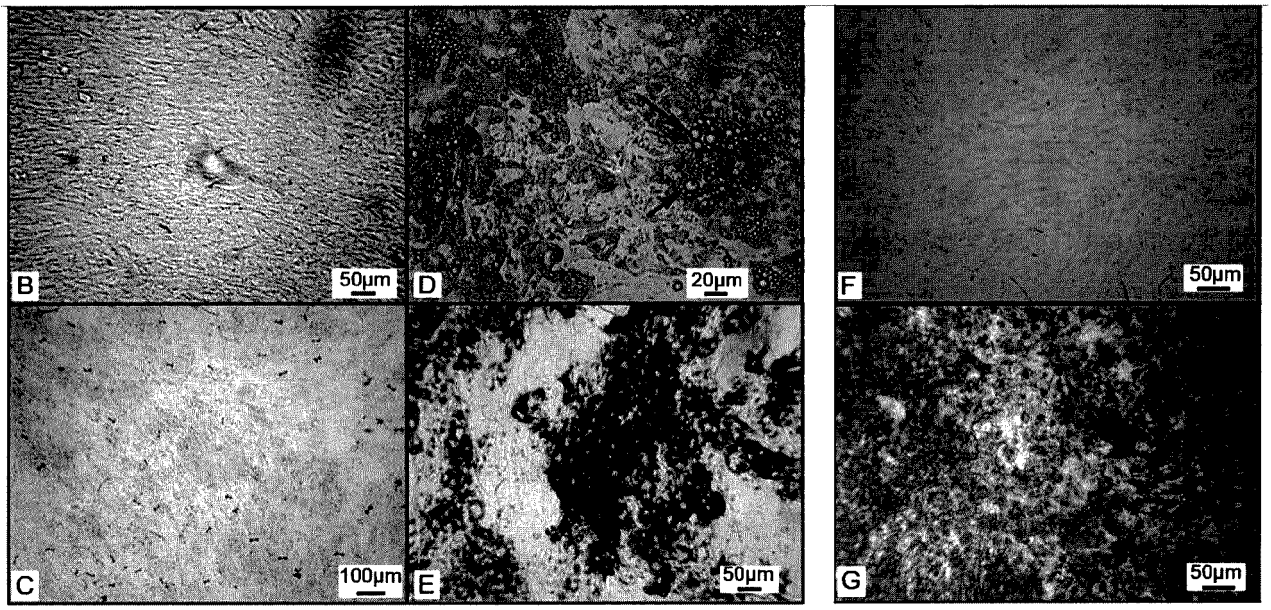


Fig. 1B-G

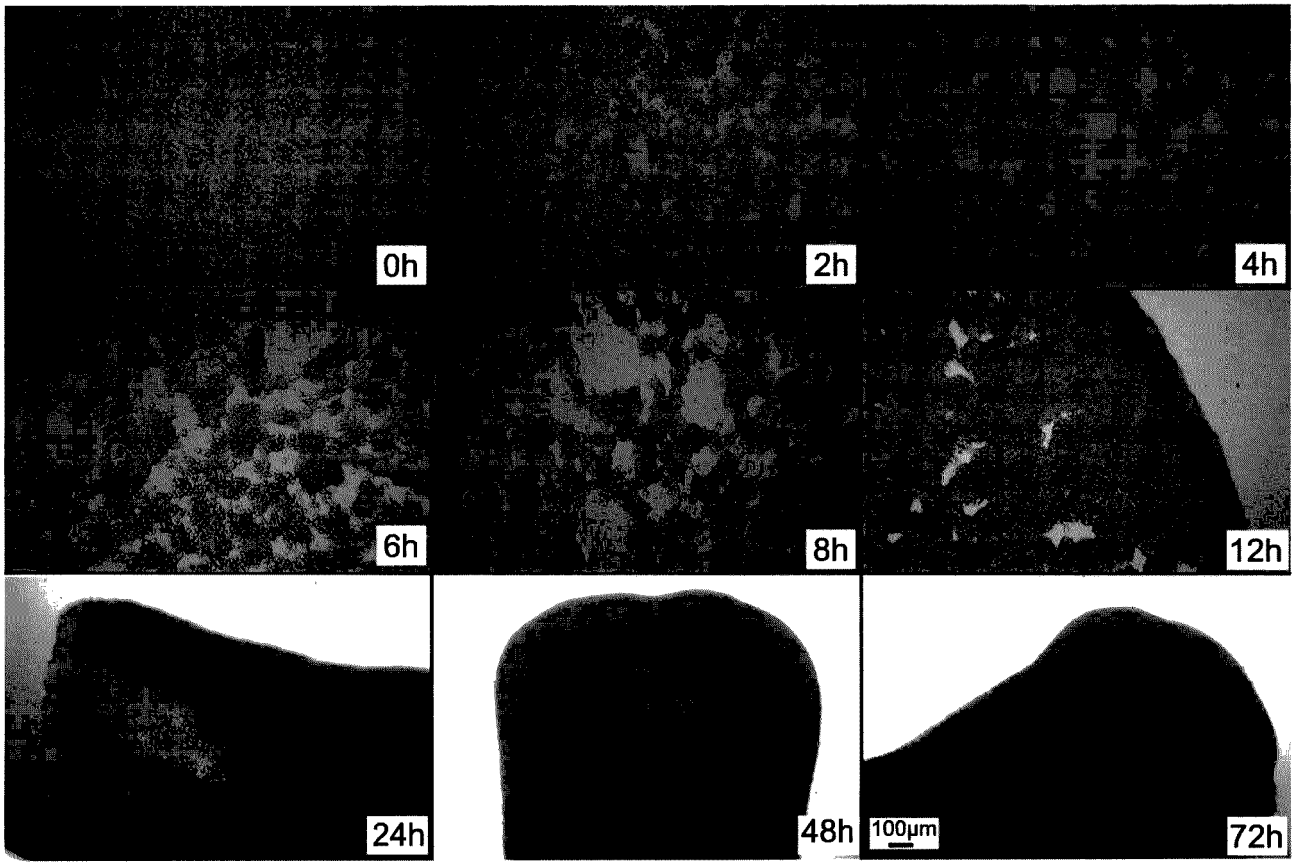


Fig. 2

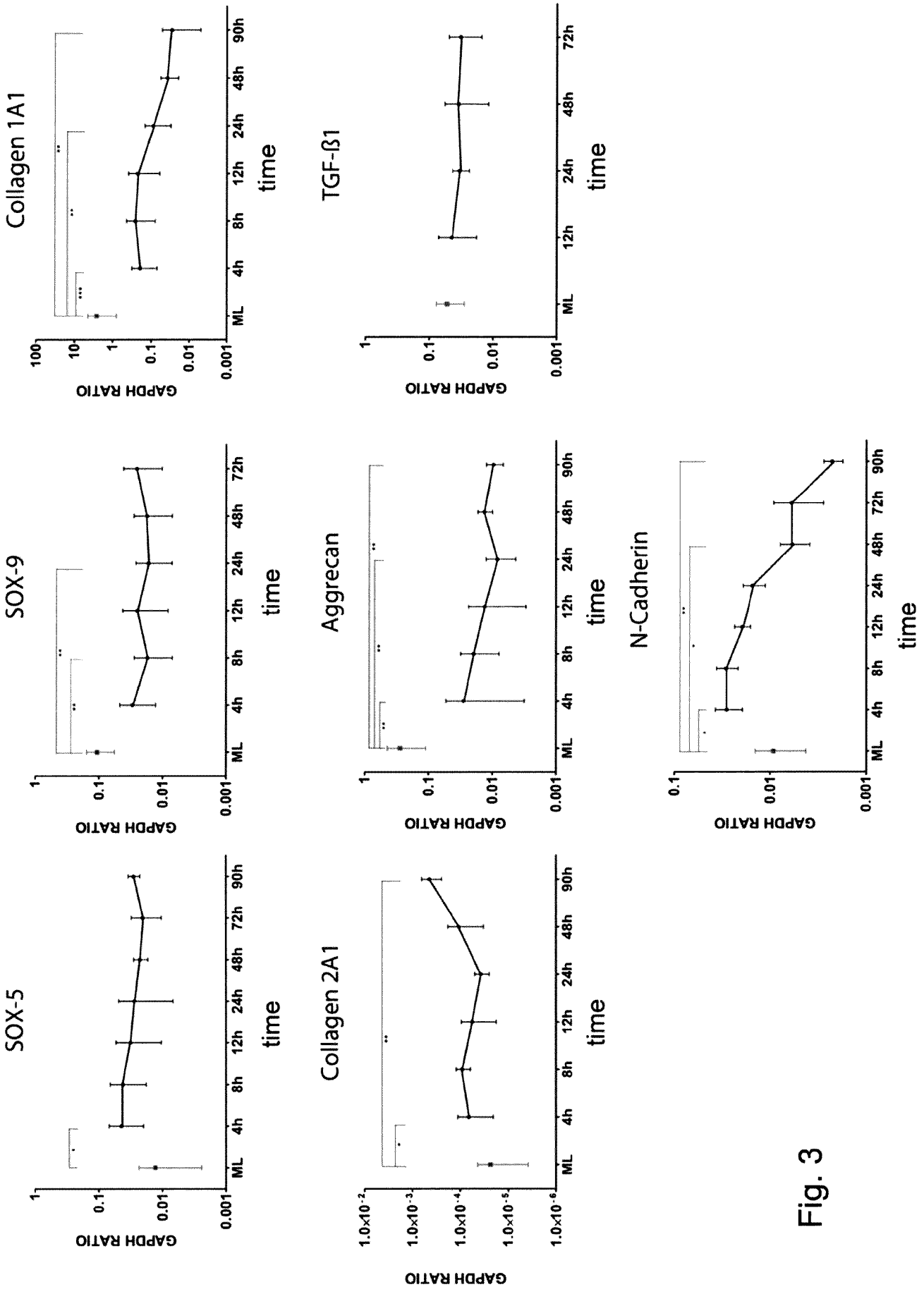

Collagen 1A1
SOX-9
SOX-5
TGF-ß1
Aggrecan
N-Cadherin
Collagen 2A1
GAPDH RATIO
time
ML
4h
8h
12h
24h
48h
72h
90h

Fig. 3

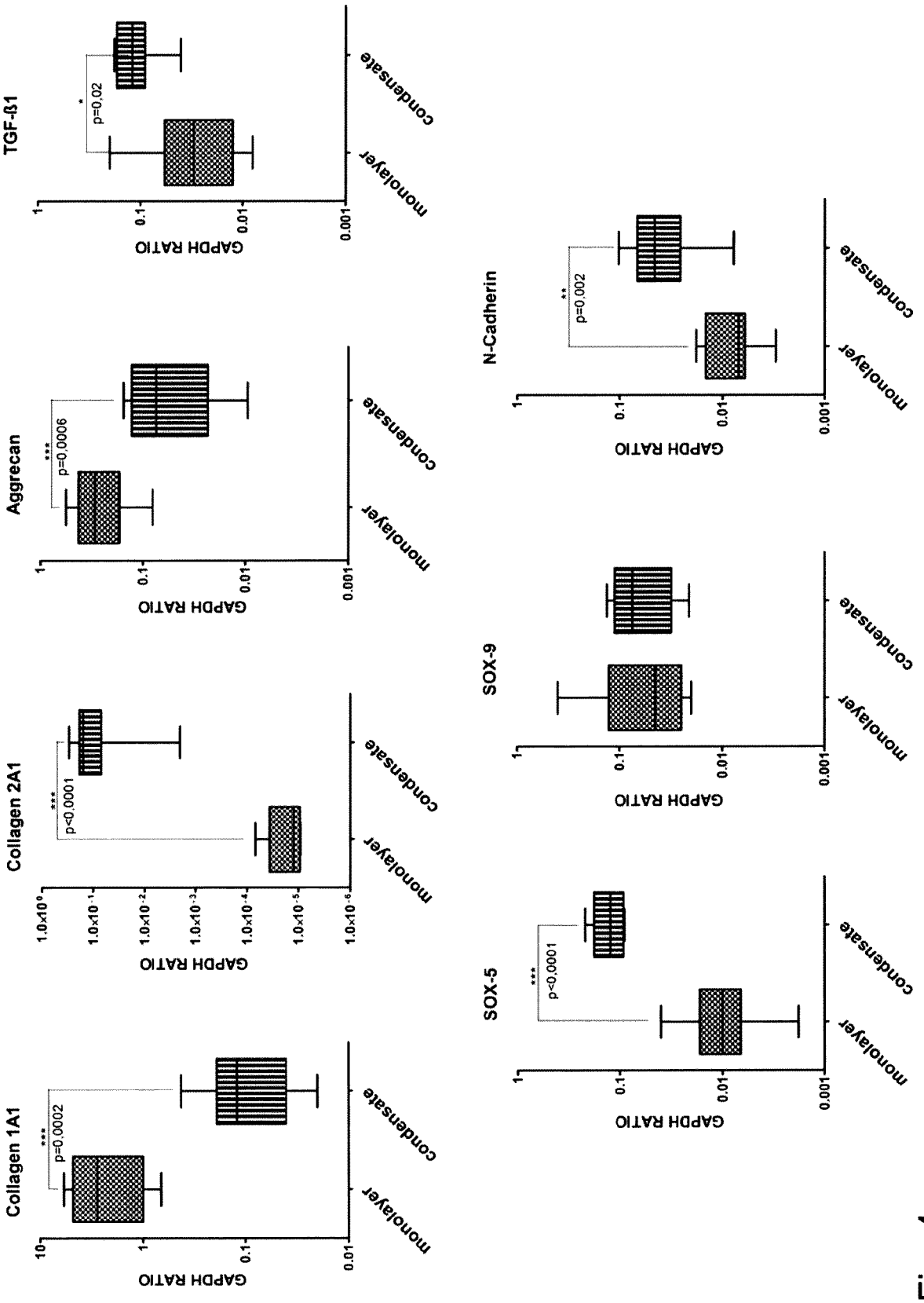
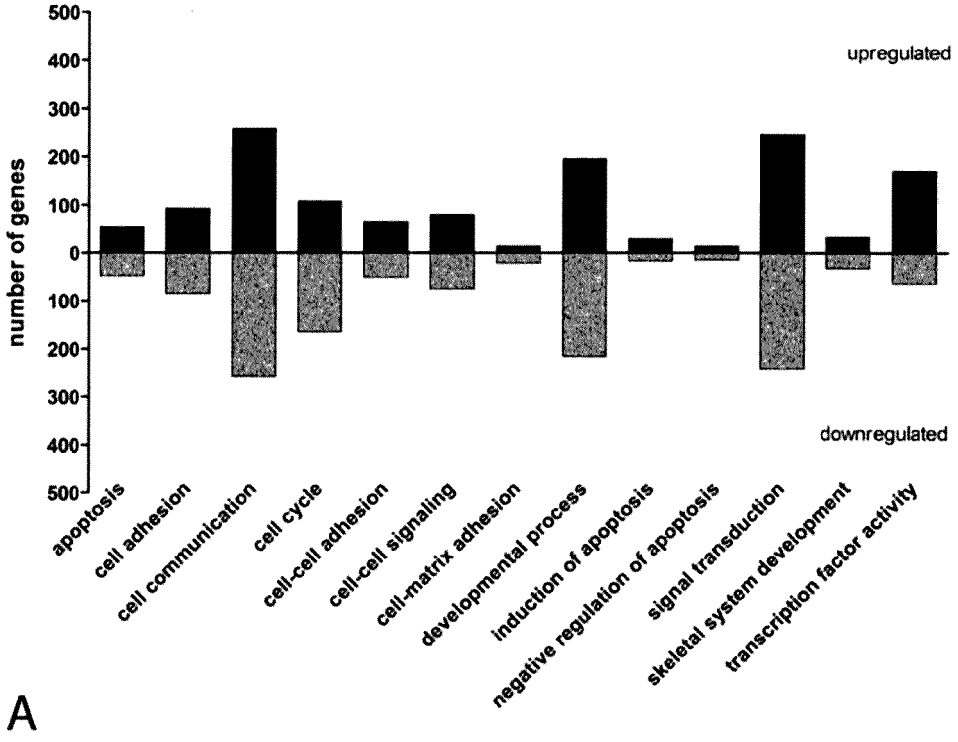
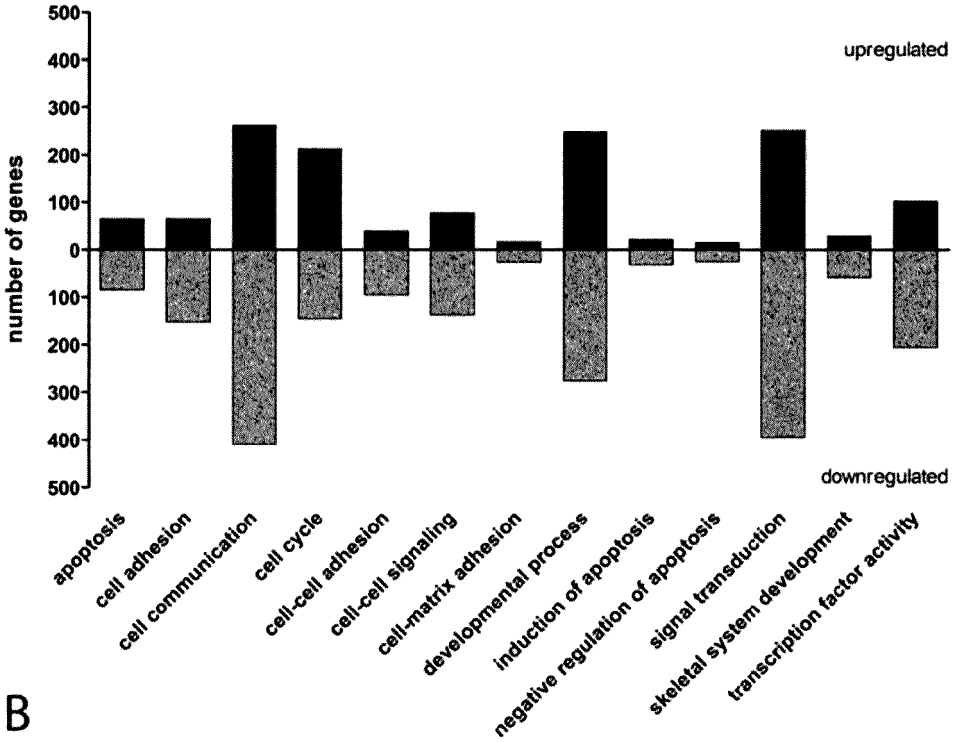

Collagen 1A1
Collagen 2A1
Aggrecan
TGF-ß1
N-Cadherin
SOX-9
SOX-5
GAPDH RATIO
monolayer
condensate
p=0,0002
p<0,0001
p=0,0006
p=0,02
p=0,002
p<0,0001

Fig. 4


number of genes
500
400
300
200
100
0
100
200
300
400
500
upregulated
downregulated
apoptosis
cell adhesion
cell communication
cell cycle
cell-cell adhesion
cell-cell signaling
cell-matrix adhesion
developmental process
induction of apoptosis
negative regulation of apoptosis
signal transduction
skeletal system development
transcription factor activity

A


number of genes
500
400
300
200
100
0
100
200
300
400
500
upregulated
downregulated
apoptosis
cell adhesion
cell communication
cell cycle
cell-cell adhesion
cell-cell signaling
cell-matrix adhesion
developmental process
induction of apoptosis
negative regulation of apoptosis
signal transduction
skeletal system development
transcription factor activity

B

Fig. 5

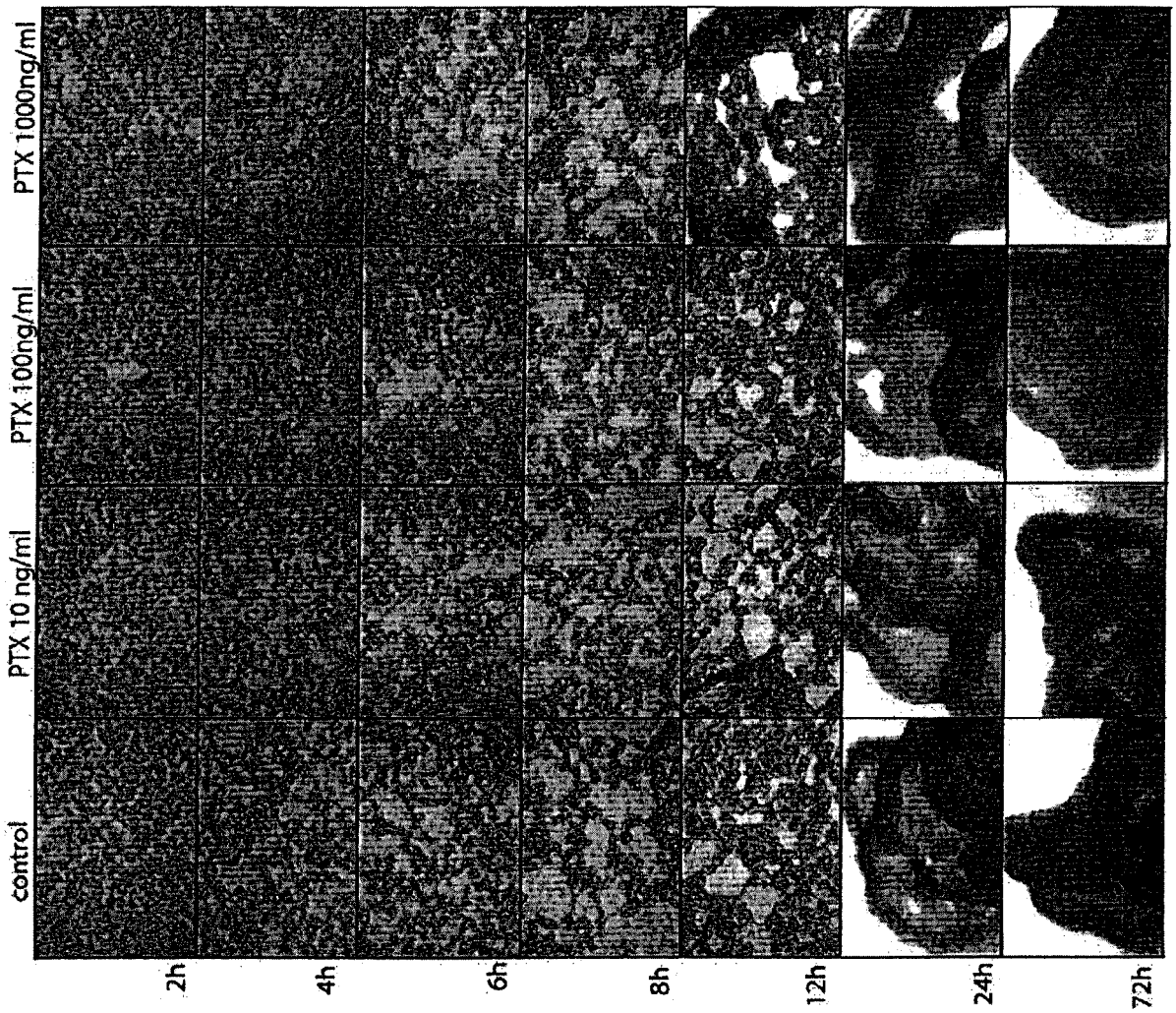

control
PTX 10 ng/ml
PTX 100ng/ml
PTX 1000ng/ml
2h
4h
6h
8h
12h
24h
72h

Fig. 6

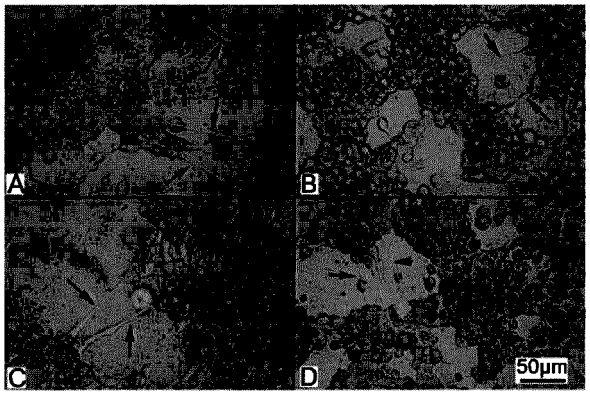


Fig. 7

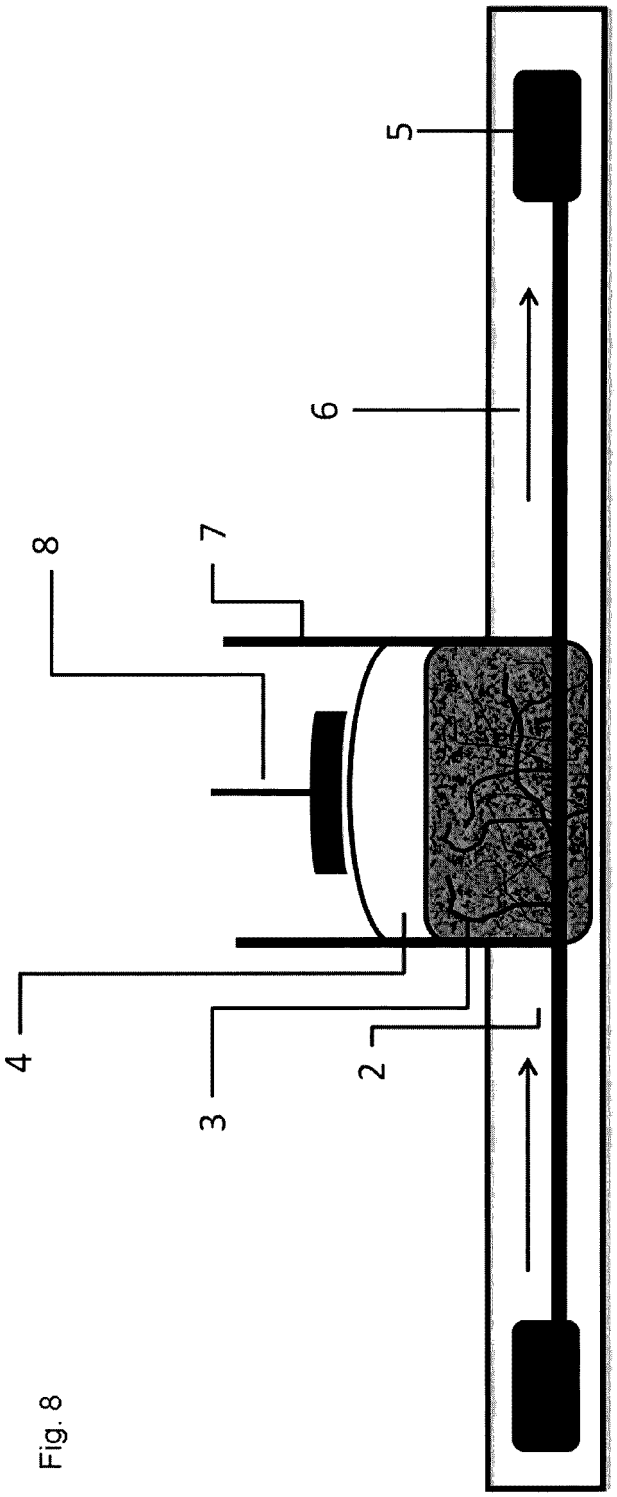


Fig. 8

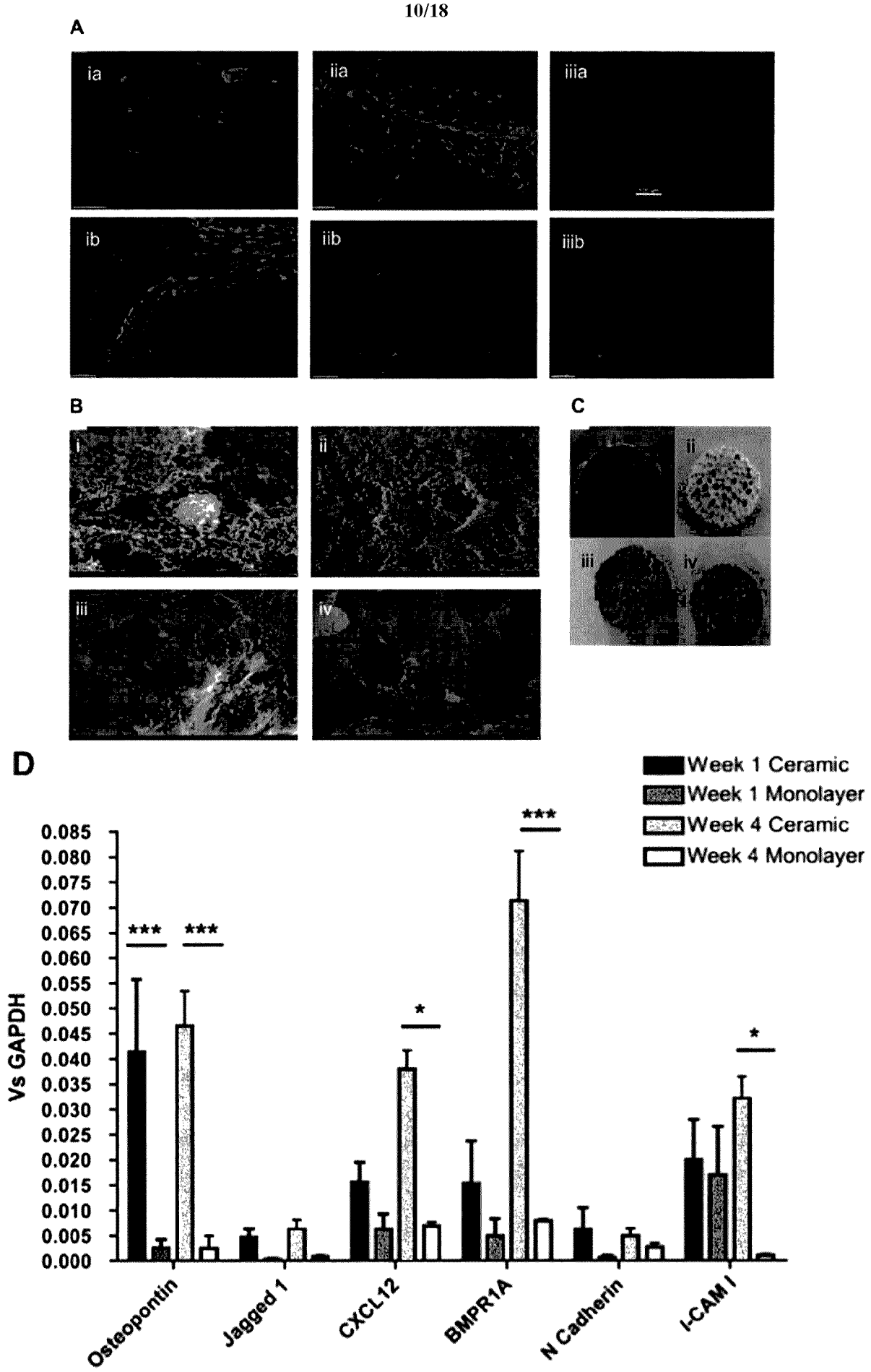

A
ia
iia
iiia
ib
iib
iiib
B
i
ii
iii
iv
C
ii
iii
iv
D
Week 1 Ceramic
Week 1 Monolayer
Week 4 Ceramic
Week 4 Monolayer
Vs GAPDH
0.085
0.080
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
***
***
*
***
*
Osteopontin
Jagged 1
CXCL12
BMPR1A
N Cadherin
I-CAM I

Fig. 9

A

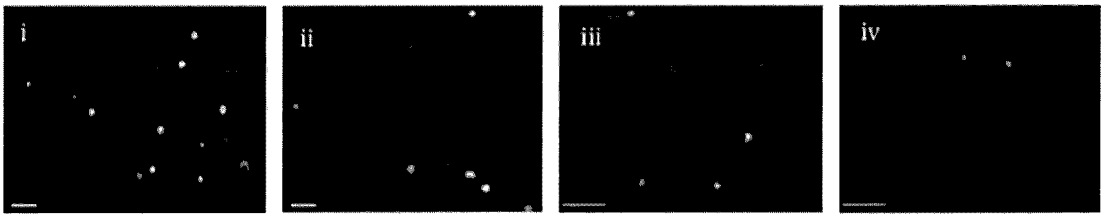


Fig.10A

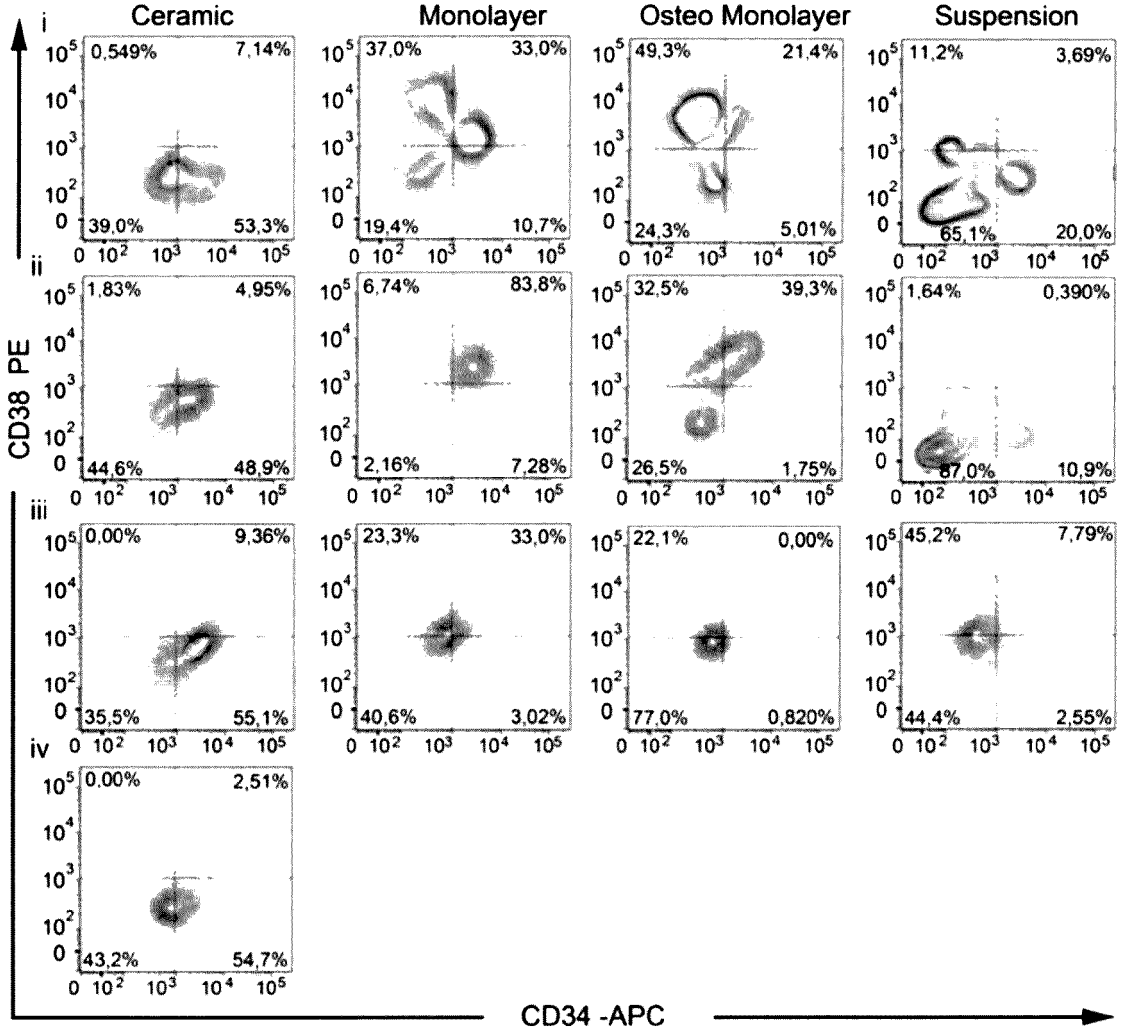

Ceramic
Monolayer
Osteo Monolayer
Suspension
i
ii
iii
iv
CD38 PE
CD34 -APC
0,549%
7,14%
39,0%
53,3%
37,0%
33,0%
19,4%
10,7%
49,3%
21,4%
24,3%
5,01%
11,2%
3,69%
65,1%
20,0%
1,83%
4,95%
44,6%
48,9%
6,74%
83,8%
2,16%
7,28%
32,5%
39,3%
26,5%
1,75%
1,64%
0,390%
87,0%
10,9%
0,00%
9,36%
35,5%
55,1%
23,3%
33,0%
40,6%
3,02%
22,1%
0,00%
77,0%
0,820%
45,2%
7,79%
44,4%
2,55%
0,00%
2,51%
43,2%
54,7%

Fig. 10B

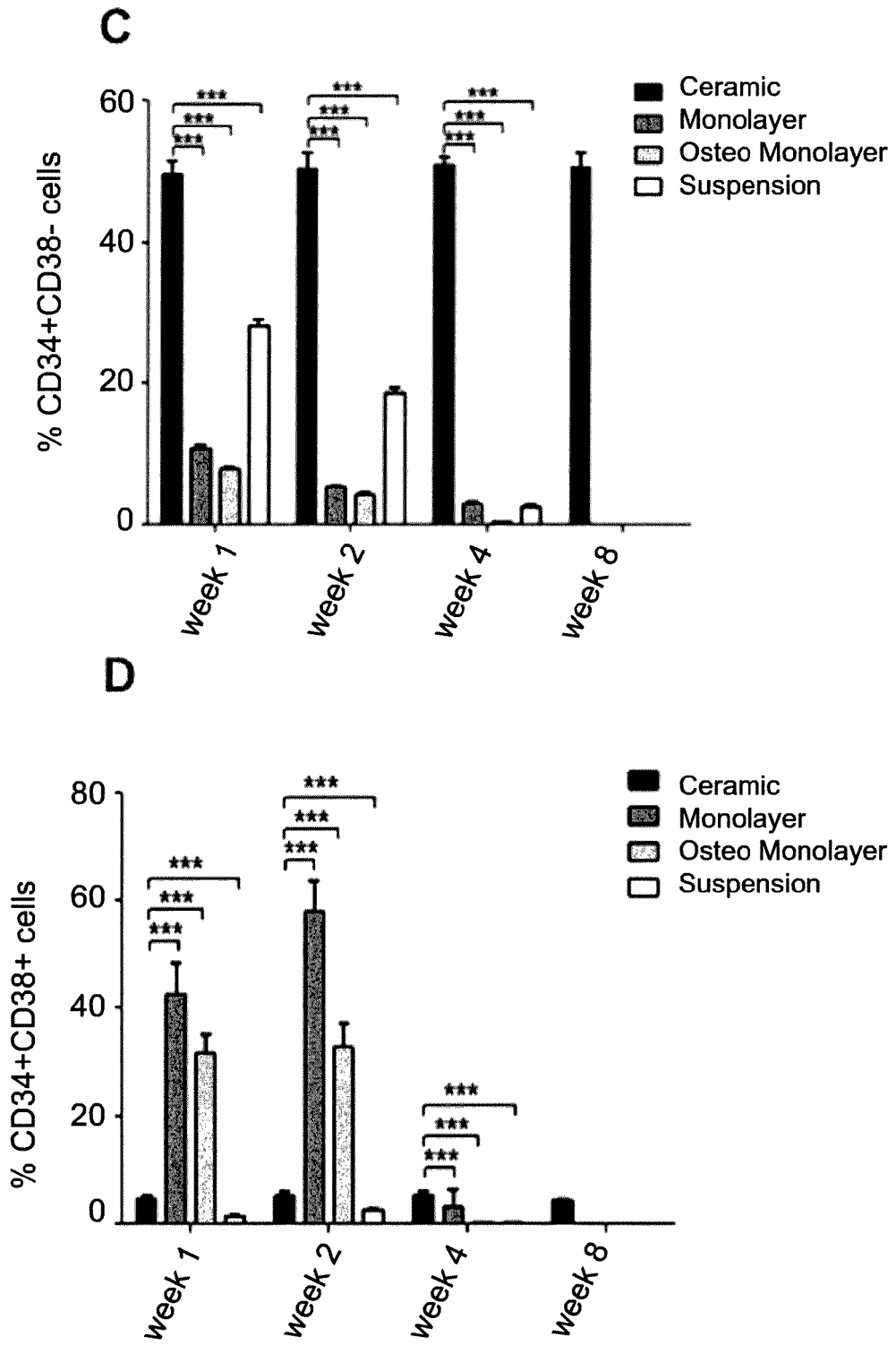

C
% CD34+CD38- cells
60
40
20
0
***
Ceramic
Monolayer
Osteo Monolayer
Suspension
week 1
week 2
week 4
week 8
D
% CD34+CD38+ cells
80
60
40
20
0
Ceramic
Monolayer
Osteo Monolayer
Suspension
week 1
week 2
week 4
week 8

Fig. 10C-D

A

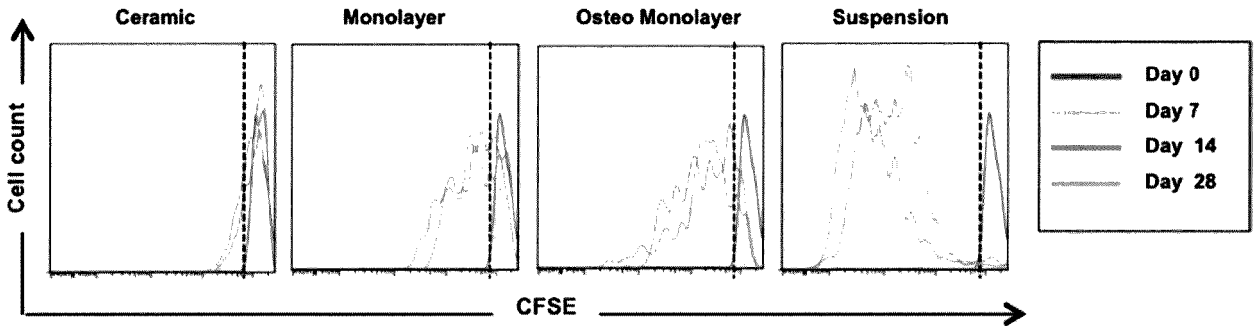

Ceramic
Monolayer
Osteo Monolayer
Suspension
Cell count
CFSE
Day 0
Day 7
Day 14
Day 28

Fig. 11A

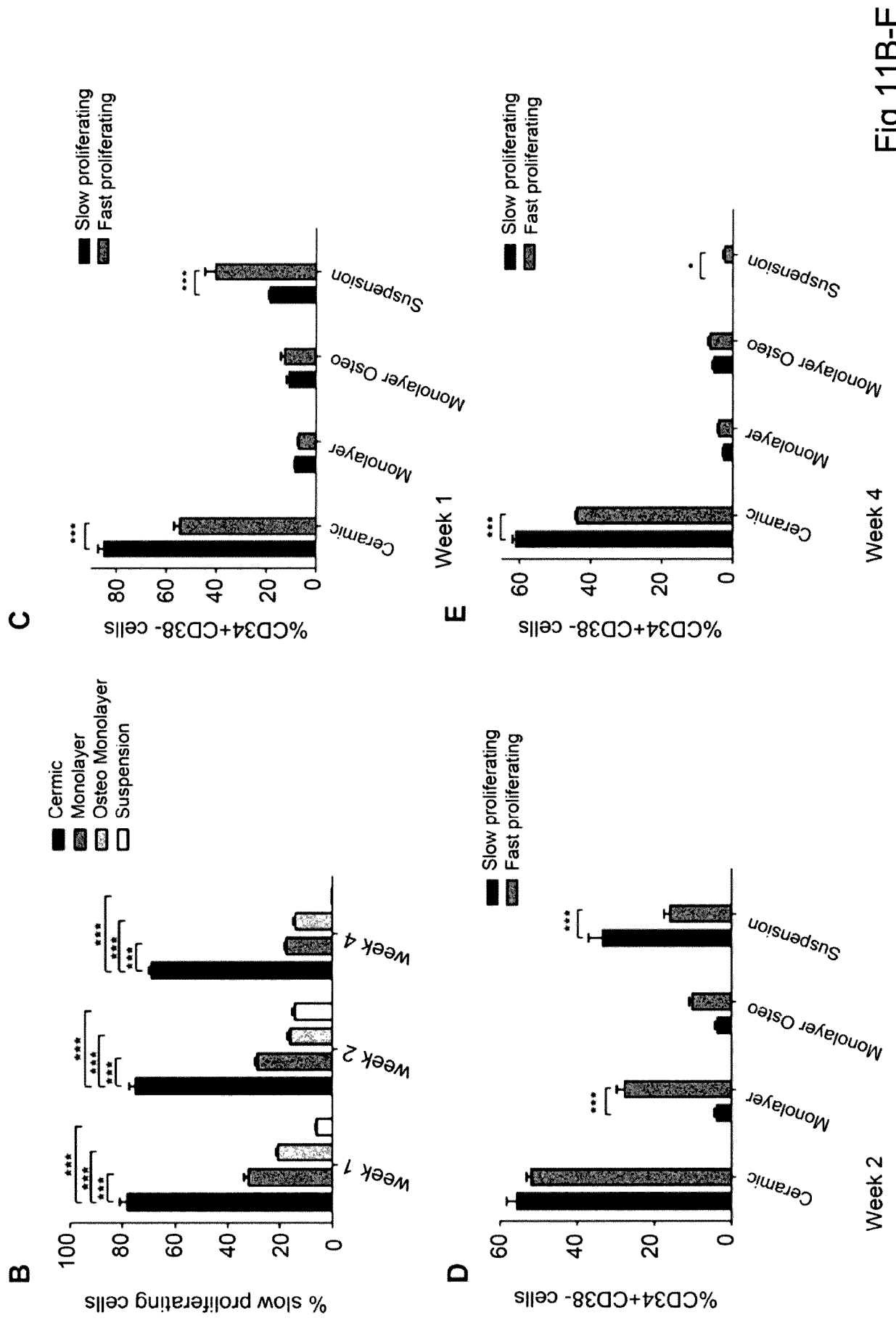

B
% slow proliferating cells
100
80
60
40
20
0
Week 1
Week 2
Week 4
Cermic
Monolayer
Osteo Monolayer
Suspension
C
%CD34+CD38- cells
80
60
40
20
0
Week 1
Ceramic
Monolayer
Monolayer Osteo
Suspension
Slow proliferating
Fast proliferating
D
%CD34+CD38- cells
60
40
20
0
Week 2
Ceramic
Monolayer
Monolayer Osteo
Suspension
Slow proliferating
Fast proliferating
E
%CD34+CD38- cells
60
40
20
0
Week 4
Ceramic
Monolayer
Monolayer Osteo
Suspension
Slow proliferating
Fast proliferating

Fig 11B-E

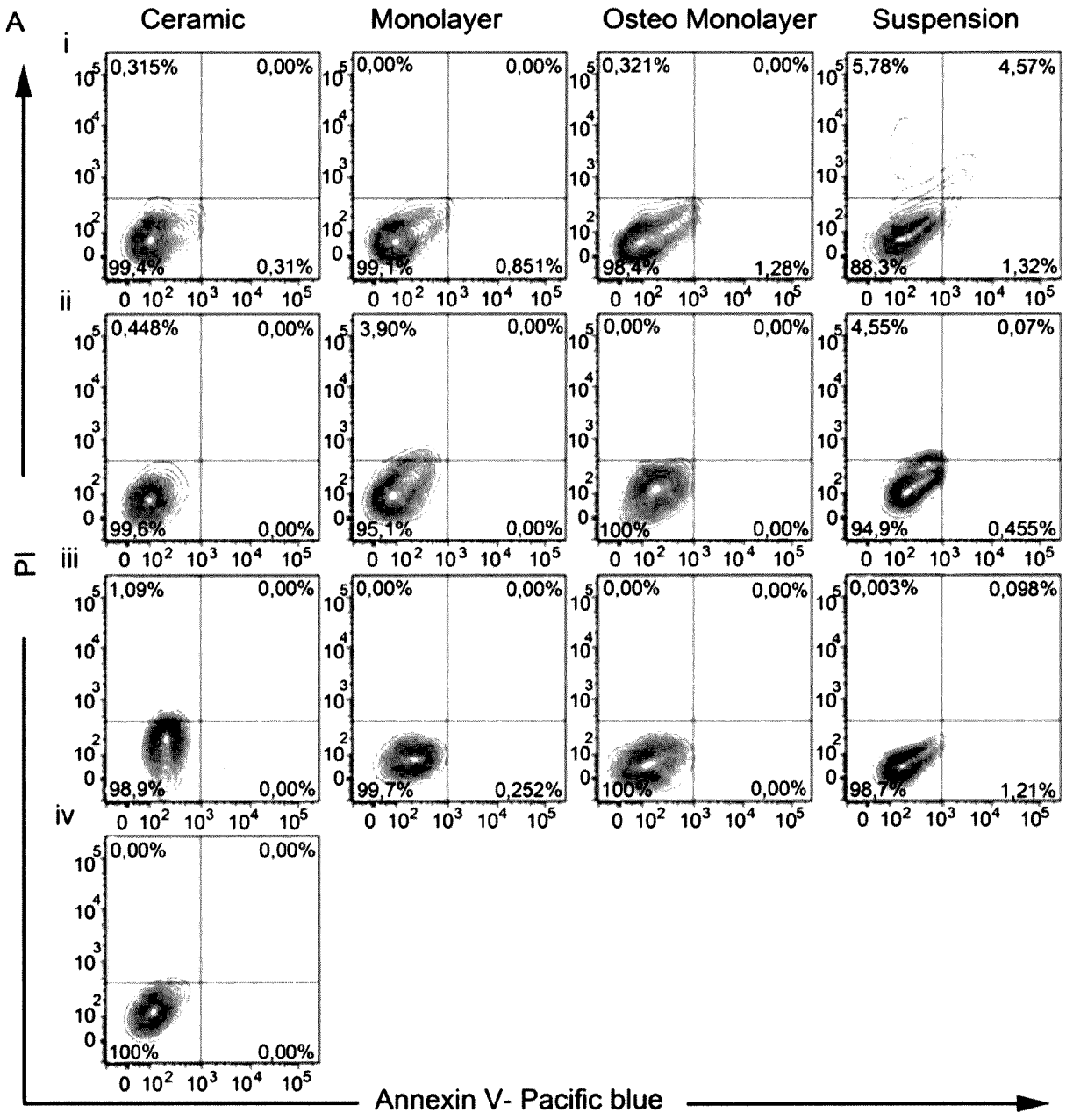

A
Ceramic
Monolayer
Osteo Monolayer
Suspension
i
ii
iii
iv
0,315%
0,00%
99,4%
0,31%
0,00%
0,00%
99,1%
0,851%
0,321%
0,00%
98,4%
1,28%
5,78%
4,57%
88,3%
1,32%
0,448%
0,00%
99,6%
0,00%
3,90%
0,00%
95,1%
0,00%
0,00%
0,00%
100%
0,00%
4,55%
0,07%
94,9%
0,455%
1,09%
0,00%
98,9%
0,00%
0,00%
0,00%
99,7%
0,252%
0,00%
0,00%
100%
0,00%
0,003%
0,098%
98,7%
1,21%
0,00%
0,00%
100%
0,00%
PI
Annexin V- Pacific blue

Fig. 12A

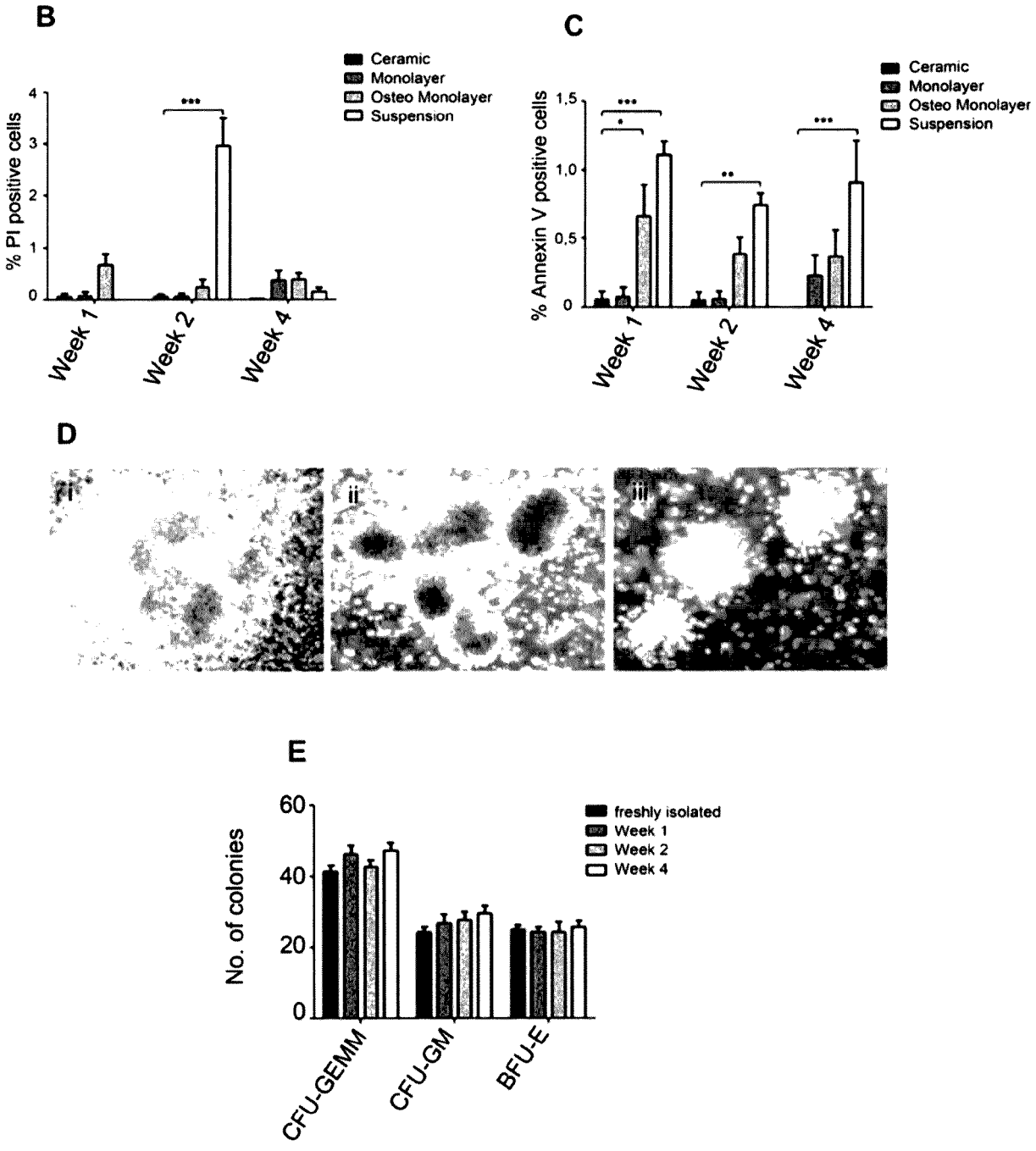

B
Ceramic
Monolayer
Osteo Monolayer
Suspension
% PI positive cells
0
1
2
3
4
***
Week 1
Week 2
Week 4
C
Ceramic
Monolayer
Osteo Monolayer
Suspension
% Annexin V positive cells
0
0,5
1,0
1,5
***
*
**
***
Week 1
Week 2
Week 4
D
i
ii
iii
E
No. of colonies
0
20
40
60
freshly isolated
Week 1
Week 2
Week 4
CFU-GEMM
CFU-GM
BFU-E

Fig. 12B-E

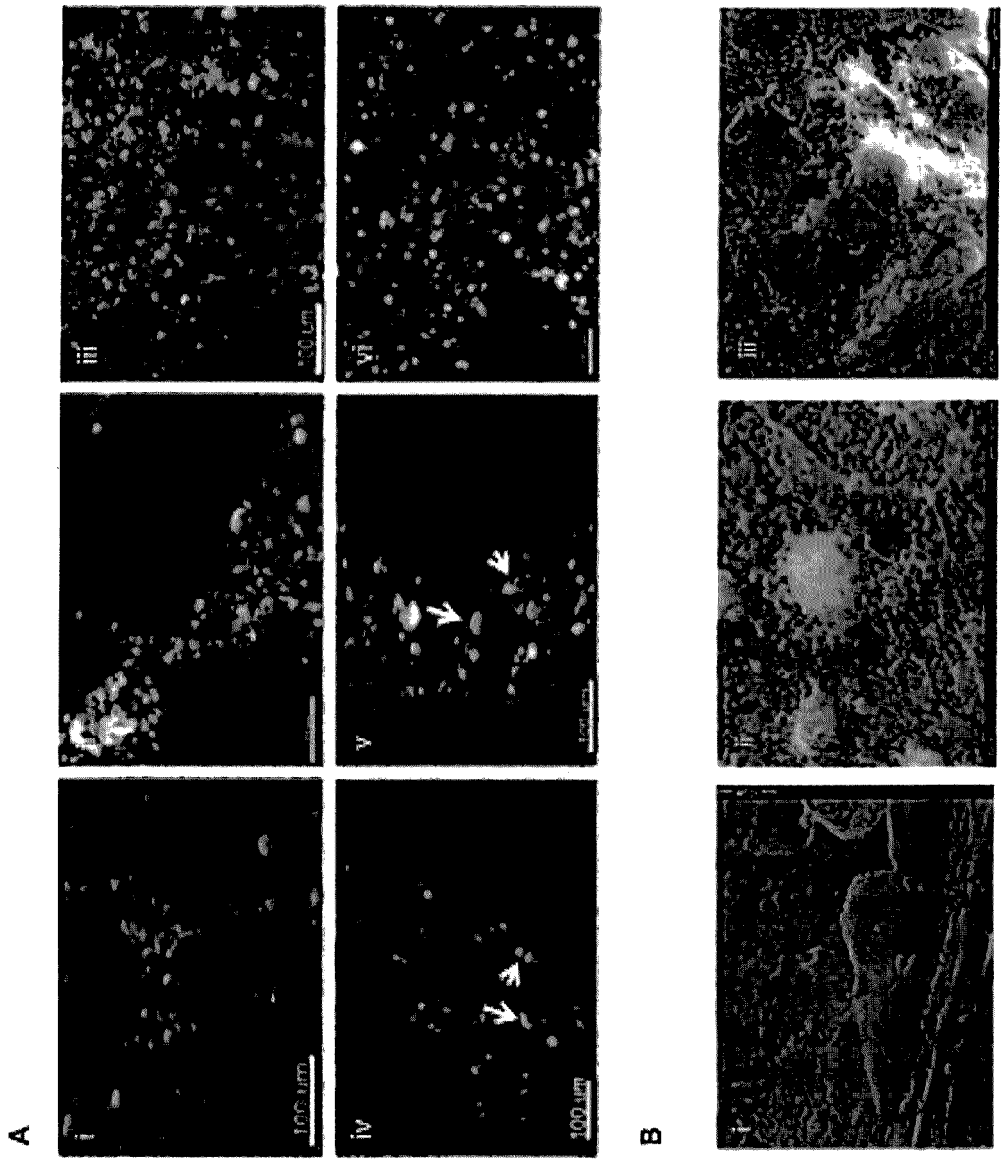


Fig. 13